

Non-invasive inner pressure measurement in elastic vessels deformed by external application of force

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Classification:
- **international:** G01L7/02; G01L15/00
- **european:** G01L9/00A; A61M5/168D4
Application number: DE19971047254 19971025
Priority number(s): DE19971047254 19971025

Abstract of DE19747254

Non-invasive inner pressure measurement in elastic vessels comprises deforming a vessel e.g. a pipe (1) by the application of an external force and measuring a reaction force $F_s(t)$ is measured. The inner pressure $p(t)$ is determined from the following equation: $p(t) = k_0 + k_1 (F_s(t) - R(t))$ In which k_0, k_1 are polynomial coefficients, $F_s(t)$ is the measured reaction force and $R(t)$ a relaxation function of the vessel.

B WPI

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\$0.00 Estimated cost FileHomeBase
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File 351:Derwent WPI 1963-2001/UD,UM &UP=200174
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DIALOG(R)File 351:Derwent WPI
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012482887 **Image available**

WPI Acc No: 1999-288995/199925

XRPX Acc No: N99-215806

Non-invasive inner pressure measurement in elastic vessels deformed by external application of force

Patent Assignee: SILBER G (SILB-I)

Inventor: SILBER G

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 19747254	A1	19990506	DE 1047254	A	19971025	199925 B

DE 19747254 C2 20000113 DE 1047254 A 19971025 200007

Priority Applications (No Type Date): DE 1047254 A 19971025

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 19747254	A1		6	G01L-007/02	
DE 19747254	C2			G01L-007/02	

Abstract (Basic): DE 19747254 A1

NOVELTY - Non-invasive inner pressure measurement in elastic vessels comprises deforming a vessel e.g. a pipe (1) by the application of an external force and measuring a reaction force $F_s(t)$ is measured. The inner pressure $p(t)$ is determined from the following equation: $p(t) = k_0 + k_1 (F_s(t) - R(t))$ In which k_0, k_1 are polynomial coefficients, $F_s(t)$ is the measured reaction force and $R(t)$ a relaxation function of the vessel.

USE - For non-invasive inner pressure measurement in elastic vessels e.g. bags, hoses and flexible tubes.

ADVANTAGE - Measurement is simplified, time needed for measurement is reduced and faults due to creepage can be excluded by using the relaxation function.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic representation of the measuring system.

Elastic vessel under test (1)

pp; 6 DwgNo 1/2

Title Terms: NON; INVADE; INNER; PRESSURE; MEASURE; ELASTIC; VESSEL; DEFORM
; EXTERNAL; APPLY; FORCE

Derwent Class: S02

International Patent Class (Main): G01L-007/02

International Patent Class (Additional): G01L-015/00

File Segment: EPI

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